## (19) World Intellectual Property Organization

International Bureau





(43) International Publication Date 11 August 2005 (11.08.2005)

(10) International Publication Number WO 2005/072710 A2

- (51) International Patent Classification7: A61K 9/51, 9/50
- (21) International Application Number:

PCT/US2005/002556

- (22) International Filing Date: 28 January 2005 (28.01.2005)
- (25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/539,773 28 January 2004 (28.01.2004) US 60/579,533 14 June 2004 (14.06.2004)

- (71) Applicant (for all designated States except US): JOHNS HOPKINS UNIVERSITY [US/US]; Licensing & Technology Development, 100 N. Charles Street, 5th Floor, Baltimore, MD 21201 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): HANES, Justin [US/US]; 5416 Purlington Way, Baltimore, MD 21212 (US). DAWSON, Michelle, Rose [US/US]; 1 Capland Ct., Perry Hall, MD 21128 (US). WIRTZ, Denis [BE/US]; 3818 Garrison St. NW, Washington, DC 20016 (US). FU, Jie [CN/US]; 6817 Queens Ferry Rd., Baltimore, MD 21239 (US). KRAULAND, Eric, Mark [US/US]; 15 Lovell St., Apt. 2, Somerville, MA 02144 (US).

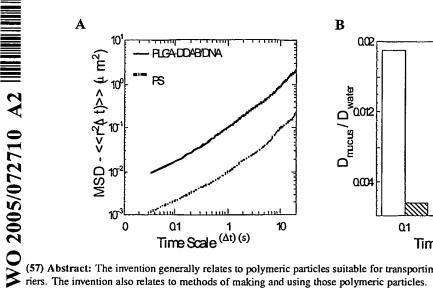
- (74) Agents: WU, Xuqiong et al.; Ropes & Gray LLP, One International Place, Boston, MA 02110-2624 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

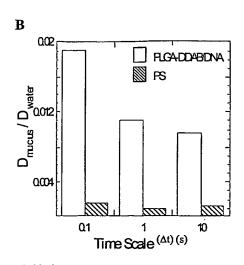
Published:

withou international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: DRUGS AND GENE CARRIER PARTICLES THAT RAPIDLY MOVE THROUGH MUCOUS BARRIERS





(57) Abstract: The invention generally relates to polymeric particles suitable for transporting bioactive agents across mucosal bar-